

## KT-10 Magnetic Susceptibility and Conductivity Meters

Magnetic Susceptibility Meters · Conductivity Meters · Combined Magnetic Susceptibility/Conductivity Meters

The KT-10 meters are a line of handheld instruments that measure the magnetic susceptibility and/or conductivity of a geological sample or core. The meters are available in circular and rectangular coil designs to measure large or small sized samples, respectively. The KT-10 meters produce repeatable results, and include features such as corrections for split and full cores, the ability to input information to correlate measurements to their appropriate depths, a built-in microphone to record voice notes, and the GeoView data management/visualization software. With its compact and rugged design, the KT-10 meters are ideal instruments for use in the field, core shack, or lab.

### **Benefits:**

- Stand-alone units with display and data storage.
- High sensitivity for magnetic susceptibility ( $10^{-7}$ SI units with KT-10H models) and conductivity (1 S/m).
- Three modes of operation: discrete measurements, continuous scanning (20 readings per second), or borehole (correlate measurements to their depth in the borehole).
- Measure core split and full drill core, rock samples, outcrop, chips or powdered samples.
- Split and full core corrections for standard drill rod diameters (AQ, BQ, HQ, NQ and PQ) and non-standard sizes (2.4 to 12 cm).
- Data running average and standard deviation values displayed during discrete measurements; data averages and maximum values provided during scanning.
- Pin mode to measure samples with uneven surfaces (available with circular coil designs only).
- Built-in microphone to record voice notes with measurements.
- GeoView software to organize and visualize data on a PC.
- Compatible with Geobank Software (available from Micromine, [www.micromine.com](http://www.micromine.com)).
- Meters can be upgraded remotely via an online firmware update.



KT-10 v2 Magnetic Susceptibility Meter (Circular Coil)



KT-10R S/C Magnetic Susceptibility/Conductivity Meter (Rectangular Coil)



KT-10R v2 (Rectangular Coil)



KT-10 S/C (Circular Coil)



**KT-10 Models**

**Dedicated Magnetic Susceptibility Meters**

KT-10 v2	KT-10R v2	KT-10H
<ul style="list-style-type: none"> <li>▪ <u>Circular</u> coil design</li> <li>▪ Sensitivity: 10<sup>-6</sup> SI units</li> <li>▪ Measurement range: 0.001 x 10<sup>-3</sup> to 1999.99 x 10<sup>-3</sup> SI units</li> <li>▪ Includes Pin mode for measuring uneven surfaces</li> <li>▪ Plus upgrade available (Optional) *</li> </ul>	<ul style="list-style-type: none"> <li>▪ <u>Rectangular</u> coil design</li> <li>▪ Sensitivity: 10<sup>-6</sup> SI units</li> <li>▪ Measurement range: 0.001 x 10<sup>-3</sup> to 1999.99 x 10<sup>-3</sup> SI units</li> <li>▪ Plus upgrade available (Optional) *</li> </ul>	<ul style="list-style-type: none"> <li>▪ <u>Circular</u> coil design only</li> <li>▪ Sensitivity: 10<sup>-7</sup> SI units</li> <li>▪ Measurement range: 0.0001 x 10<sup>-3</sup> to 1999.99 x 10<sup>-3</sup> SI units</li> <li>▪ Includes Pin mode for measuring uneven surfaces</li> <li>▪ Plus upgrade available (Optional) *</li> </ul>

**Dedicated Conductivity Meters**

KT-10 C	KT-10R C
<ul style="list-style-type: none"> <li>▪ <u>Circular</u> coil design</li> <li>▪ Absolute conductivity meter, calibrated using multi-point algorithm</li> <li>▪ Sensitivity: 1 S/m</li> <li>▪ Measurement range: 1 to 100,000 S/m</li> <li>▪ Includes Pin mode for measuring uneven surfaces</li> <li>▪ Cx upgrade available (Optional) *</li> </ul>	<ul style="list-style-type: none"> <li>▪ <u>Rectangular</u> coil design</li> <li>▪ Absolute conductivity meter, calibrated using multi-point algorithm</li> <li>▪ Sensitivity: 1 S/m</li> <li>▪ Measurement range: 1 to 100,000 S/m</li> <li>▪ Cx upgrade available (Optional) *</li> </ul>

**Combined Magnetic Susceptibility/Conductivity Meters**

KT-10 S/C	KT-10R S/C	KT-10H S/C
<ul style="list-style-type: none"> <li>▪ <u>Circular</u> coil design</li> <li>▪ Sensitivity: <ul style="list-style-type: none"> <li>- Magnetic susceptibility: 10<sup>-6</sup> SI units</li> <li>- Conductivity: 1 S/m</li> </ul> </li> <li>▪ Measurement range: <ul style="list-style-type: none"> <li>- Magnetic susceptibility: 0.001 x 10<sup>-3</sup> to 1999.99 x 10<sup>-3</sup> SI units</li> <li>- Conductivity: 1 to 100,000 S/m</li> </ul> </li> <li>▪ Includes Pin mode for measuring uneven surfaces</li> <li>▪ Plus upgrade available (Optional) *</li> <li>▪ Cx upgrade available (Optional) *</li> </ul>	<ul style="list-style-type: none"> <li>▪ <u>Rectangular</u> coil design</li> <li>▪ Sensitivity: <ul style="list-style-type: none"> <li>- Magnetic susceptibility: 10<sup>-6</sup> SI units</li> <li>- Conductivity: 1 S/m</li> </ul> </li> <li>▪ Measurement range: <ul style="list-style-type: none"> <li>- Magnetic susceptibility: 0.001 x 10<sup>-3</sup> to 1999.99 x 10<sup>-3</sup> SI units</li> <li>- Conductivity: 1 to 100,000 S/m</li> </ul> </li> <li>▪ Plus upgrade available (Optional) *</li> <li>▪ Cx upgrade available (Optional) *</li> </ul>	<ul style="list-style-type: none"> <li>▪ <u>Circular</u> coil design only</li> <li>▪ Sensitivity: <ul style="list-style-type: none"> <li>- Magnetic susceptibility: 10<sup>-7</sup> SI units</li> <li>- Conductivity: 1 S/m</li> </ul> </li> <li>▪ Measurement range: <ul style="list-style-type: none"> <li>- Magnetic susceptibility: 0.0001 x 10<sup>-3</sup> to 1999.99 x 10<sup>-3</sup> SI units</li> <li>- Conductivity: 1 to 100,000 S/m</li> </ul> </li> <li>▪ Includes Pin mode for measuring uneven surfaces</li> <li>▪ Plus upgrade available (Optional) *</li> <li>▪ Cx upgrade available (Optional) *</li> </ul>

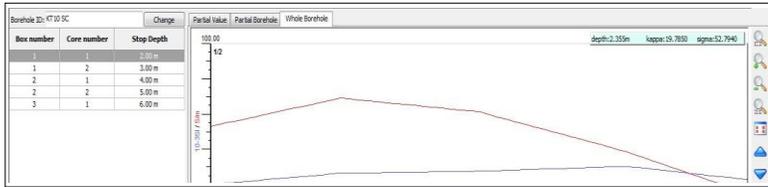
\* See the Options section on the next page for a full description of the Plus and Cx upgrades available



**GeoView Software**

Id	Time	Kappa/Conc.	Average susc. +/- std	Sigma/Conc.	Average cond. +/- std	Information	Latitude	Longitude	Altitude
62	3:01:34 PM	2.7600 [10-30]	2.7670 +/- 0.0090	2405.3520 [5/m]	2413.3880 +/- 18.3810				
63	3:05:14 PM	195.0110 [10-30]		1184.8050 [5/m]					
64	3:05:24 PM	224.1630 [10-30]	209.5870 +/- 20.6130	1403.3510 [5/m]	1297.5780 +/- 159.4840				
65	3:08:36 PM	64.0900%		0.0000 [5/m]		Kappa Curve1			
66	4:31:07 PM	4.4720 [10-30]					43o51'22.95"N	79o27'28.68"W	228m
67	4:31:13 PM	4.2070 [10-30]					43o51'22.96"N	79o27'28.70"W	228m
68	4:31:19 PM	5.3880 [10-30]					43o51'22.96"N	79o27'28.72"W	227m
69	4:31:25 PM	2.3420 [10-30]					43o51'22.96"N	79o27'28.75"W	227m
70	4:31:31 PM	3.8890 [10-30]	4.0400 +/- 1.0820				43o51'22.97"N	79o27'28.78"W	227m

Data Organization



Data Visualization

GeoView is an easy-to-use data management and visualization software program that is compatible with all Windows operating systems.

It enables users to download, store and view a KT-10 meter's data on a PC and export it to Excel. Data is organized by date or by instrument serial number, when there are data from multiple meters. Averaged readings, voice notes, and GPS positions (when paired with a Bluetooth GPS unit) can also be reviewed.

The software can also be used as a data visualization tool. Numerical values from discrete measurements are displayed in a table format; data from scanned measurements are displayed as a graph.

**Options**

**S/C Upgrade for Dedicated Magnetic Susceptibility or Conductivity Meters**

- Upgrade a dedicated meter to an S/C model to simultaneously measure magnetic susceptibility and conductivity.

**Plus Upgrade for Magnetic Susceptibility Measurements:**

- Increase measurement range to 10 SI units.
- Obtain magnetite iron ore concentration estimates (%) directly from the display

**Cx Upgrade for Conductivity Measurements**

- Increase conductivity measurement range to 200,000 S/m.



KT-10 Plus v2

**Magnetic Susceptibility Calibration Pads**

Two flat calibration pads are available to recalibrate any KT-10 that is capable of measuring magnetic susceptibility or to verify the meter's readings. The calibration pads come in Low and High susceptibility ranges. The calibration pad with High values is only suitable for instruments with the Plus upgrade.

	Low	High
Typical Nominal Susceptibility Values	34 x 10 <sup>-3</sup> SI	2500 x 10 <sup>-3</sup> SI
Diameter:	145 mm	145 mm
Height:	70 mm	70 mm
Weight:	2.65 kg	2.65 kg
Colour	Orange	Blue



Magnetic Susceptibility Calibration Pads

**Conductivity Reference Pads**

Three flat reference pads are available to verify conductivity measurements. The reference pads come in Low, Medium and High conductivity ranges.

	Low	Medium	High
Typical Nominal Conductivity Values	9 S/m	700 S/m	85,000 S/m
Diameter	152 mm	128 mm	152 mm
Height	50 mm	50 mm	50 mm
Weight	1.2 kg	1.0 kg	1.8 kg
Colour	Red	Yellow	Green



Conductivity Reference Pads



Specifications	
<b>Operating Frequency:</b>	10 kHz
<b>Measurement Frequency:</b>	20 readings per second in Scan Mode, storing 4 averaged readings per second.
<b>Display:</b>	High contrast LCD display with 104 x 88 pixels
<b>Memory:</b>	8 GB: 4,000 total records stored * * 4,000 scanner measurements, with up to 480 data points per record (total of 1,920,000 individual data points) * 4,000 discrete measurements, with 120 seconds of voice notes per reading. <i>Note: discrete and scan records can be combined.</i>
<b>Control:</b>	One button with up / down functionality
<b>Data Input/Output:</b>	USB and Bluetooth (GPS pairing)
<b>Power Supply:</b>	2 'AA' batteries (alkaline or rechargeable)
<b>Battery Life:</b>	Up to 2,000 measurements without voice recorder while using rechargeable batteries (3,000 measurements with alkaline batteries)
<b>Operating Temperature Range:</b>	-20°C to 60°C
<b>Meter Dimensions:</b>	200mm x 57 mm x 32 mm
<b>Coil Dimensions:</b>	Circular Coil: 65 mm (diameter)
	Rectangular Coil: 65 mm (length) x 32 mm (width)
<b>Weight:</b>	0.33 kg with 2 'AA' alkaline batteries installed

*Specifications subject change without notice (July 11, 2024)*

Instrument Contents		
KT-10 v2, KT-10R v2 & KT-10H	KT-10 C & KT-10R C	KT-10 S/C, KT-10R S/C & KT-10H S/C
(1) KT-10, KT-10R or KT-10H Meter (1) Carrying Pouch with Foam Insert (2) Pins (Circular coil designs only) (2) AA Alkaline Batteries (1) USB Data Transfer Cable (1) USB Key with GeoView Software and Operations Manual (1) Quick Reference Guide	(1) KT-10 C or KT-10R C Meter (1) Carrying Pouch with Foam Insert (2) Pins (Circular coil designs only) (2) AA Alkaline Batteries (1) USB Data Transfer Cable (1) USB Key with GeoView Software and Operations Manual (1) Quick Reference Guide	(1) KT-10 S/C, KT-10R S/C or KT-10H S/C Meter (1) Carrying Pouch with Foam Insert (2) Pins (Circular coil designs only) (2) AA Rechargeable Batteries & Charger (1) USB Data Transfer Cable (1) USB Key with GeoView Software and Operations Manual (1) Quick Reference Guide (1) Rugged Transportation Case
		

